



California ISO

# Energy Storage and Distributed Energy Resources Phase 2

Customer Partnership Group

February 27, 2018

1 p.m. – 2 p.m. (Pacific Standard Time)

# Agenda

## Item

Project Schedule Update

Data Submission Requirements and Proposed New  
Data Submission Requirements Update

Day Matching Baseline Type Example - Combined  
Residential and Non-Residential

Questions Received and ISO Answers

Next Steps

# Fall 2018 – ESDER Phase 2 Project Schedule Update

Project Info	Details/Date
Application Software Changes	<p><b>Settlements:</b></p> <ul style="list-style-type: none"> <li>• Alternative Baselines:               <ul style="list-style-type: none"> <li>• Possible system changes to include addition of an automated monitoring tool for performance measurement data received from external participants.</li> <li>• Changes to the DRRS registration system for the selection of the new baselines and allowing for ISO approval prior to use in the market.</li> <li>• Settlement configuration will need to be evaluated and revised to assure PDRs that provide AS services can be calculated correctly based on the submitted SQMD.</li> </ul> </li> </ul> <p><b>ECIC:</b></p> <ul style="list-style-type: none"> <li>• EIM Net Benefits Testing:               <ul style="list-style-type: none"> <li>• Code modification to calculation to accommodate addition of all applicable gas price indices.</li> </ul> </li> </ul> <p><b>MRI-S:</b></p> <ul style="list-style-type: none"> <li>• Alternative Baselines:               <ul style="list-style-type: none"> <li>• The DRS Decommissioning project seeks to retire the current DRS system. Once this system is retired all current functionality will reside in the MRI-S (Market Results Interface – Settlements) system. It should be noted that all available customer load baseline calculations will be submitted into the MRI-S system once the DRS system is retired.</li> </ul> </li> </ul>
BPM Changes	<p><b>Market Instruments:</b></p> <ul style="list-style-type: none"> <li>• EIM Net Benefits Testing:               <ul style="list-style-type: none"> <li>• Changes will include addition of all gas price indices used in calculation.</li> </ul> </li> </ul> <p><b>Metering:</b></p> <ul style="list-style-type: none"> <li>• Alternative Baselines:               <ul style="list-style-type: none"> <li>• Need to revise the BPM to explain new baselines and changes to existing systems.</li> </ul> </li> <li>• Station Power:               <ul style="list-style-type: none"> <li>• Need to revise BPM to provide examples of wholesale/retail uses for generation and storage</li> <li>• Need to revise BPM to clarify permitted/prohibited netting rules.</li> </ul> </li> </ul> <p><b>Definitions &amp; Acronyms:</b></p> <ul style="list-style-type: none"> <li>• Station Power:               <ul style="list-style-type: none"> <li>• Revision of Station Power definition to match Tariff language.</li> </ul> </li> </ul> <p><b>Settlements &amp; Billing:</b></p> <ul style="list-style-type: none"> <li>• Alternative Baselines:               <ul style="list-style-type: none"> <li>• Possible changes to reflect settlements configuration changes.</li> </ul> </li> </ul>

# Fall 2018 – ESDER Phase 2 Project Schedule Update

Project Info	Details/Date
Business Process Changes	<ul style="list-style-type: none"> <li>• Develop Infrastructure (DI) (80001)</li> <li>• Manage Market &amp; Reliability Data &amp; Modeling (MMR) (80004)</li> <li>• Manage Operations Support &amp; Settlements (MOS) (80007)</li> <li>• Support Business Services (SBS) (80009)</li> <li>• Other</li> </ul>

Milestone Type	Milestone Name	Dates	Status
Board Approval	Obtain Board of Governors Approval	Jul 26, 2017	✓
BPMs	Post Draft BPM changes	Jun 04, 2018	
	Publish Final Business Practice Manuals	Jul 02, 2018	
External BRS	Post External BRS	Oct 17, 2017	✓
	Post Revised External BRS	Mar 01, 2018	
Tariff	Post Draft Tariff	Nov 17, 2017	✓
	Post Updated Draft Tariff (based on feedback)	Apr 20, 2018	
	File Tariff with FERC	Jun 01, 2018	
CPG	Next CPG Meeting	Feb 27, 2018	
Config Guides	Settlements Config Guides	May 18, 2018	
Tech Spec	Publish ISO Interface Spec (Tech spec)	Mar 27, 2018	
Market Sim	Market Sim Window	Jul 17, 2018 - Aug 31, 2018	
Production Activation	ESDER Phase 2	Oct 01, 2018	

# Data Submissions in MRI-S will include new Measurement Types that will be used in Settlements Calculations

## Requirements in current external BRS – Used in Settlements

- DREM as GEN measurement type
- Load data as LOAD measurement type
  - Represents the aggregated load value for the PDR/RDRR during the period of Spin or Non-Spin award/dispatch (event)
- Load data as MBMA measurement type
  - In addition to the LOAD measurement type data
  - when awarded Spin or Non-Spin, needed as separate data

See External BRS BRQs 0109,0112,0115,0118

# Additional Data Submission requirements **in development** (new external BRS scheduled for 3/1/18) will include **new** Measurement Types needed for analysis

## Day Matching and Weather Matching Baseline Types

- Baseline = load data (SQMD) used to develop the non-adjusted baseline
  - Measurement\_type = **CBL**
    - ✓ Data not needed for settlement, monitoring/analysis only
      - Data Submitted to the MRI\_S
      - Resource and registration ID identified in submittal
      - Data not used in Settlement
      - Data used for monitoring/analysis
      - Continuous set of data needed from time resource ID becomes active to the trade date the event occurred with minimum set of days being 90 days
    - Submit on a daily basis **or** ability to submit full set of data once dispatch occurs
    - 24 hours, hourly granularity

# Additional requirements in development will include submission of **Control Group** load data (updated)

## Control Group Baseline Type

- Baseline = load data (SQMD) used to develop the **Control Group** baseline
  - Measurement\_type = **CBL**
    - ✓ Data not needed for settlement, monitoring/analysis only
      - Data Submitted to the MRI\_S
      - Resource and registration ID identified in submittal
      - Data not used in Settlement
      - Data used for monitoring/analysis
      - Continuous set of data needed from time resource ID becomes active to the trade date the event occurred with minimum set of days being 90 days
  - Submit on a daily basis **or** ability to submit full set of data once dispatch occurs
  - 24 hours, hourly granularity

# Additional requirements in development will include submission of **Treatment Group** load data

## Control Group Baseline Type

- Treatment Group = aggregated load of service accounts responding to a dispatch = load data (SQMD)
  - Measurement\_type = **TMNT**
    - ✓ Data not needed for settlement, monitoring/analysis only
      - Data Submitted to the MRI\_S
      - Resource and registration ID identified in submittal
      - Data not used in Settlement
      - Data used for monitoring/analysis
      - Continuous set of data needed from time resource ID becomes active to the trade date the event occurred with minimum set of days being 90 days
  - Submit on a daily basis **or** ability to submit full set of data once dispatch occurs
  - 24 hours, hourly granularity



# Questions Received

- What is the interval size needed for submittal?
  - No changes to current meter requirements for development of baselines
    - Hourly for day-ahead only
    - Fifteen-minute for real-time
    - Statistical sampling option
  - Demand Response Energy Measurement (DREM) and settlement load data interval size submittal (SQMD)
    - Five-minute
  - Baseline development (for monitoring purposes only)
    - Hourly

## Questions Received (cont'd)

- Issue - The requirement to submit SQMD into MRI-S for validation purposes is problematic, since load data is tied to a specific set of customers at any point in time—if MRI-S only allows one set of data per resource per day, then there will be no way to submit data for DREM validation
- We are developing requirements for baseline data submittal to MRI-S (for monitoring purposes only), to be submitted by identifying both resource and registration ID
  - Allows for multiple sets of data to be submitted for one resource over the same period of time



# Questions?

# Next Steps

- Please submit further questions or comments to:

Elaine Siegel  
[esiegel@caiso.com](mailto:esiegel@caiso.com)

- Customer Partnership Groups webpage available at:  
<http://www.caiso.com/informed/Pages/MeetingsEvents/CustomerPartnershipGroups/Default.aspx>

Thank you!

# THANK YOU

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